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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,167	12/31/2003	Vikram A. Saleatore	884.B75US1	5042
21186 7590 01/23/2008 SCHWEGMAN, LUNDBERG & WOESSNER, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			EXAMINER NGUYEN, VAN KIM T	
			ART UNIT 2152	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/750,167	Applicant(s) SALETORE, VIKRAM A.	
	Examiner Van Kim T. Nguyen	Art Unit 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 31, 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>September 3, 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to communications filed on December 31, 2003.

Claims 1-23 are pending in the case.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on September 3, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

3. The drawings are objected to because of the following reasons:

- All drawings must be made by a process which will give them satisfactory reproduction characteristics. Every line, number, and letter must be durable, clean, black (except for color drawings), sufficiently dense and dark, and uniformly thick and well-defined. The weight of all lines and letters must be heavy enough to permit adequate reproduction. This requirement applies to all lines however fine, to shading, and to lines representing cut surfaces in sectional views. Lines and strokes of different thickness may be used in the same drawing where different thickness have a different meaning.
- The unlabeled boxes shown in the drawings, e.g., Figures 1 and 4-6, should be provided with descriptive text labels.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the

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sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 21-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 21 is not limited to tangible embodiments. In view of Applicant's disclosure, specification page 15: lines 2-8, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., Compact Disk (CD), a Digital Versatile Disk (DVD), a floppy disk, a removable hard drive, etc.) and intangible embodiments (e.g., carrier wave). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

To overcome this type of 101 rejection the claims need to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media, e.g., carrier medium and transmission media would be non-statutory but storage media would be statutory.

To expedite a complete examination of the instant application the claims rejected under 35 USC 101 (nonstatutory) above further rejected as set forth below in anticipation of applicant amending these claims to place them within the four categories of invention.

Dependant claims 22-23 depend on claim 21, thus are rejected under the same basis.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: no structural cooperative relationships between claimed elements processor, memory, system area network connection, and local area network connection.

9. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1 recites the limitations "the local area network" in line 8 and "the system area network" in line 11. There are insufficient antecedent basis for these limitations in the claim since "the local area network" and "the system area network" have not been introduced prior their occurrences.

Dependent claims 2-7 depend on claim 1 and thus are rejected under the same basis.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 7, 15-16 and 17-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Ackaouy et al (US 7,171,469), hereinafter Ackaouy.

Regarding claims 1, 15-16 and 18-23, as shown in Figure 1A-B, Ackaouy discloses a server (115) comprising:

a processor (unit comprising 162-169; col. 5: lines 28-39);

a memory (170, 171; col. 5: lines 50-60);

a system area network connection (161; col. 4: lines 17-19 and col. 5: lines 28-29);

a local area network connection (161; col. 4: lines 11-17 and col. 5: lines 28-29); and

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Since computers/computing hardware cannot do any useful work without instructions from software, i.e., a combination of software and hardware is necessary to do any computerized work, thus the proxy server is anticipated comprising software to:

load unique content into the memory from a storage location (e.g., proxy cache 115 caches active data set 140; col. 4: lines 65-67);

receive requests for content over the local area network (e.g., a client device 105 requests data; col. 4: line 40);

service requests for the content in memory (e.g., if it is a cache hit, the proxy cache 115 will transmit the request data to the requesting client 105; col. 4: lines 43-47);

service requests for content located in a memory of another server by obtaining the content over the system area network (e.g., if it is a cache miss, the proxy cache 115 will request the data from a server 110 and then provide the data to the requesting client 105; col. 4: lines 48-50); and

cache content used to service request for content located in the memory of the other server for use in servicing subsequent requests for identical content (e.g., the data from server 110 will be cached as an active dataset 140 in the proxy cache 115 and is available to other clients 105; col. 4: lines 50-52).

Regarding claim 7, Ackaouy also discloses the unique content is loaded into memory prior to the server being available to service content requests (e.g., frequently requested data set 140 is cached in proxy server 115; col. 4: lines 65-67).

Regarding claim 17, Ackaouy also discloses requests are received into the local area network on a router coupled to the Internet (e.g., load balancer 2220 or network switch 2405; col. 21: lines 7-11 and 53-56).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ackaouy, as applied to claim 1 above.

Ackaouy does not explicitly call for the software operable on the processor to be a component of an operating system (OS) of the server, but since the main purpose of an OS is to organize and control hardware and software so that the computing devices behaving in a flexible but predictable way, it would have been obvious to one of ordinary skill in the art at the time the invention was made the software can be made to be a part of the OS in order to better monitor and control the computing devices.

Regarding claim 3, though Ackaouy does not explicitly call for the software operable on the processor to be a driver; however, as it is well known in the art, a device/software driver is any computer program that allows other programs to interact with a computer hardware device, i.e., a driver is an interface for communicating with the device, or emulates a device. Since

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drivers are hardware-dependent and operating system specific, it would have been obvious to one of ordinary skill in the art at the time the invention was made the software operable on the processor may be modified to be a driver in order to allow interaction with a particular computer hardware device.

Regarding claim 4, Ackaouy does not explicitly call for the software operable on the processor to be a middleware component; however, as it is well known in the art, middleware is software that mediates between an application and a network. It manages the interaction between disparate applications across the computing platforms. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made the software operable on the processor may be a middleware component in order to mediating between an application and a network.

13. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ackaouy, as applied to claim 1 above, in view of Yeh et al (Introduction to TCP/IP Offload Engine (TOE), Version 1.0, 10GEA Alliance, April 2002), hereinafter Yeh.

Ackaouy does not explicitly call for the system area network a TCP Offload Engine (TOE) Gigabit Ethernet network.

Yeh teaches a 10 Gigabit Ethernet TCP Offload Engine enabled (TOE) network (pages 1-5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Yeh's TCP/IP offload engine in Ackaouy's system in order to improve network performance, i.e., lowering server CPU utilization and increasing the data throughput.

14. Claims 8-9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al (US 6,438,652), hereinafter Jordan.

Regarding claims 8-9, as shown in Figures 1-5, Jordan discloses a system comprising:
a networking logic device performing functions of devices including a router, a switch, a firewall, or a content director (load monitor120);

two or more servers, each server operatively coupled to the networking logic device (servers 15); and

an operating system on each of the two or more servers including one or more software components including executable instructions to (operating system 100 including administration 103 and file I/O 106; col. 3: lines 20-28):

make the content of each server memory available to the other servers over the networking logic device (col. 3: lines 3-19), and

receive and fulfill content requests over the networking logic device with content from a server's local memory or from a memory of another server over the networking logic device (col. 3: lines 3-19).

Regarding claim 12, Jordan also discloses the software includes executable instructions to cache content of other servers in memory for use in fulfilling later requests for the content in the

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cache (e.g., upon a cache miss, a cache server asks the directory for the object. The directory server sends the request to the server whose cache includes the object. If found, the object is then sent to the requesting server while the original server continues to cache the object; col. 2: lines 44-55).

Regarding claims 13-14, Jordan also discloses the networking logic device maintains a table of content available on the system area network and routes requests based on the table (e.g., the cooperating cache servers can each include a distributed load monitor for monitoring and locally maintaining load conditions, and also maintain a forwarding frequency and ownership information in a local copy of a caching table; col. 4: lines 29-37).

15. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan, in view of Schuh et al (US 7,254,617), hereinafter Schuh.

Jordan discloses substantially all the claimed limitations, except a storage area network operatively coupled to the networking logic device.

Schuh teach a storage area network (NAS 16) coupled to network servers 12 (col. 2: lines 32-33; Figure 1).

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jordan's system with Schuh's network storage in order to store a large number of files.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Method and System for Caching Secure Web Content; Chawla et al (US 7,137,143);

Predicate Indexing of Data Stored in a Computer with Application to Indexing Cached Data, Ganguly et al (US 6,629,132);

Method for Distributing Packets to Server Nodes Using Network Client Affinity and Packet Distribution Table, Modi et al (US 6,587,866);

Client-Server System with Parity Storage, Kobayashi et al (US 5,905,847).

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Van Kim T. Nguyen whose telephone number is 571-272-3073. The examiner can normally be reached on 8:00 AM - 4:30 PM.

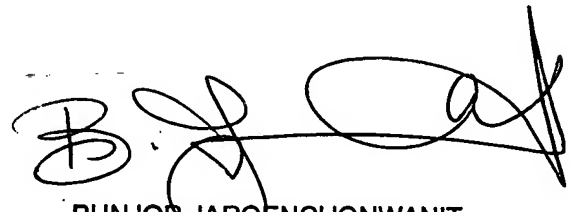
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Van Kim T. Nguyen
Examiner
Art Unit 2152

vkn



BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER
1/18/8